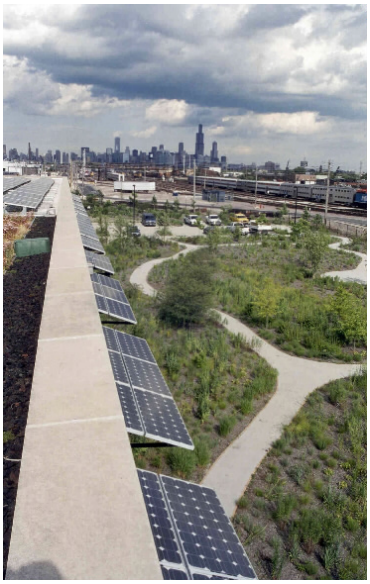


From Brownfield to Brightfield in Chicago, IL

One of the nation's premiere "green" buildings, the Chicago Center for Green Technology, was built in 1999 on the site of an illegal dump in a federally designated Empowerment Zone, the Kinzie Corridor. The building is one of only five buildings in the country to receive the U.S. Green Building Council's prestigious Leadership in Energy and Environmental Development (LEED) Platinum rating. It is also the first municipal building and brownfields site to receive the award, as well as the only renovated building and only building accessible by public transportation to do so.

In early 1995, the City of Chicago Department of Environment (DOE) discovered that the Sacramento Crushing Company had far exceeded the scope of its operating permit as a construction and demolition recycling company. The company had illegally filled its 17 acre site just west of downtown Chicago, Illinois with 600,000 cubic yards of construction waste and debris in 70 foot-high piles, some of which sank 15 feet into the ground. The Illinois EPA cited Sacramento Crushing for illegally developing and operating a solid waste storage and treatment facility.



The Chicago DOE shut down the facility and took over ownership of the property in 1996. The City then spent $9 million to clean the site with funding from a variety of sources, including a HUD Section 108 loan, funding from legal settlements, and City funds. Additional cleanup costs were recouped by selling concrete and other materials to recycling firms and others for Green Buildings use in a variety of construction projects, including the foundation for Chicago's Millennium Park.

Once remediation was complete, Chicago DOE focused its efforts on renovating the 34,000 square foot building that sat on the site. Committed to promoting the use of green technology, the City worked with the U.S. Department of Energy's Brightfields program and the American Institute of Architects Committee on the Environment to renovate the building in accordance with the U.S. Green Building Council's LEED standards. The Green Building Council was established in 1993 to "promote buildings that are environmentally responsible, profitable and healthy places to live and work." Among other things, the Council developed the LEED green building rating system to help promote and catalyze the use of green building technologies.

Based on the LEED standards, Chicago turned the Sacramento Crushing building into the Chicago Green Technology Center and a premiere national model of green building techniques. The building uses 40 percent less energy than a comparably sized building and relies on renewable energy for

heating, cooling, and electricity. In addition, 20 percent of the building's energy is provided by solar panels on the roof, on awnings and in a lot behind the building. The building depends significantly on daylight provided by large, double-paned, insulating windows for both light and heating. The facility is also equipped with a smart lighting system that detects the level of natural light and adjusts the level of electric light accordingly. Over 40 percent of the materials used in the building rehabilitation are recycled or reused, including flooring made from scrap cork and bathroom tiles manufactured from recycled aviation glass.

The building also helps prevent contamination of nearby lakes and streams by limiting urban stormwater runoff. In many urban areas, stormwater rolls over roofs, sidewalks, parking lots, and other impervious surfaces, picking-up contaminants along the way, and washing them into public sewers and eventually lakes and streams. Much of the roof at the Green Technology Center is covered with a "greenroof" system consisting of three inches of a sedum-based planting that reduces the cooling load of the building, while protecting the roof's waterproof membrane. Succulent plant species on the roof absorb a significant portion of the rainwater and much of the remaining stormwater is collected in one of four cisterns for use in landscaping at the site. Reusing the stormwater for landscaping also helps reduce the facility's water usage. Finally, unlike most urban buildings, rain that flows through the Center's downspouts empties into the soil, rather than into the public sewer system. Together these features reduce the stormwater flow into sewers by more than 50 percent.

The Green Technology Center's tenants are also environmentally friendly. The Spire Solar corporation, which produces utility-interactive solar systems, has located its factory in the Center. As part of its effort to generate 20 percent of its electrical power from alternative sources, the City has formed a partnership with Spire and Commonwealth Edison to install solar panels on museums, schools, and other public buildings. Chicago DOE's Greencorps Chicago program, a community landscaping and job training program that provides horticultural instruction, materials, and employment, is headquartered at the Center. The facility also houses the offices for WRD Environmental, a landscaping company that is focused on sustainable landscaping and has partnered with the City to develop the "Greencorps" program. The Green Technology Center has helped stimulate the redevelopment of the distressed Kinzie corridor. In redeveloping the area, the City has retained 450 jobs from a neighboring company that was planning to leave Chicago altogether. The Center itself created 38 new jobs, with the potential to create an additional 200. Additionally, Greencorps Chicago serves over 200 community groups each year through workshops and gardening materials.

In addition to earning the LEED Platinum award, the building also won the prestigious Phoenix award for Excellence in Brownfield Redevelopment, and was named one of the American Institute of Architects Top Ten Green Projects in 2003.

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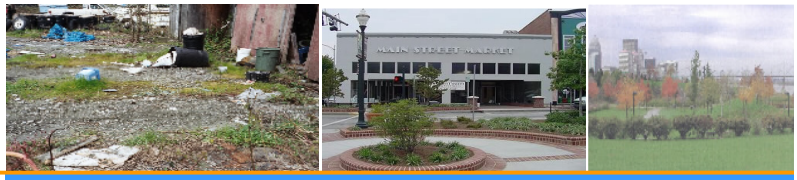

Baltimore, MD Recycles a National Landmark into the Montgomery Park Business Center

For over 15 years, the former east coast catalog distribution center for the Montgomery Ward department store company sat idle on 26 acres in southwest Baltimore, contributing to the economic decay of the area. Today, it has been transformed into the Montgomery Park Business Center, a Leadership in Energy and Environmental Design (LEED) gold rated "green" building that is helping to revitalize the West Baltimore Empowerment Zone.

The art deco building, which was built in 1925, was Baltimore's largest mercantile building and has been placed on the national register of historic places for the role the building played in the catalog business. Montgomery Ward closed the building in 1985 when it eliminated its mail order business. The property gradually deteriorated until it was purchased for redevelopment. The structure had the types of contaminants that were common to its era of construction — interior and exterior lead paint, asbestos, petroleum, and PCBs. The site also had six underground storage tanks that had to be removed. The estimated cost of cleanup was approximately $2 million.

The developer, Sam Himmelrich, chose to renovate the building and incorporate a number of "green building" concepts. He recycled tiles, concrete, glass, and other materials existing at the site. In addition, he replaced an impervious surface cover on the roof with a 30,000 square foot green roof that will reduce storm water and nutrient runoff into the nearby Gwynns Falls watershed by an estimated 50 to 75 percent each year. It also reduces the overall roof surface temperature of the Montgomery Park Business Center by up to 40 degrees. The roof, which consists of vegetation, soil, insulation, and geo-textile layers, was funded by a $92,000 grant from the EPA.

The complex also boasts a number of other green building features, such as a 10,000 gall on extra space rainwater collection tank on the roof for toilet flushing, and operable windows to allow for natural air flow when this makes sense. Existing windows were reused, with glass panes replaced with new insulated glass that have improved thermal performance by 63 percent. The new glass is specially coated to maximize the transmission of natural light while limiting the admission of heat into the building. The air conditioning uses graywater, which is frozen at night when the demand for energy is lower. Finally, the building's lights are equipped with sensors, which dim the artificial light if there is enough sunlight.

Like many sites incorporating an innovative approach, the developers of Montgomery Park used a blend of public and private funding sources to pull the $100 million renovation project together. These included:

- a $29 million construction loan from Citibank;
- an $8 million HUD Section 108 loan guarantee, in conjunction with the City of Baltimore;

- a $1 million HUD Brownfields Economic Development Initiative (BEDI) grant, that was used as an interest reserve for the 108-backed loan;
- $4.5 million in grants from the Empower Baltimore Management Corporation;
- $1 million from the Lubert Adler Real Estate Fund; and
- $2 million through the Maryland Department of Business and Economic Development Brownfields Revitalization Incentive Program.

In addition, nearly $2 million came from tenants through reimbursements for improvements. Because the building is located in an Empowerment Zone and is on the National Register of Historic places, the developers received $13.87 million in state tax credits and $13.66 million in federal tax credits. The development partners put $1 million in equity into the project.

In the end, this project converted an 80 year-old historic structure into a state-of-the-art green building. To date, 540,000 square feet of space are leased. This represents 40 percent of the space in what is now the largest office building in Baltimore. Tenants include the NCO Group, a financial services firm; the Maryland Department of the Environment; the Maryland Lottery; and First Health. 1,800 people currently work at Montgomery Park, with a workforce of 3,500 to 5,000 projected. It is expected that ten percent of these jobs will be entry-level positions for low and semi-skilled workers.

Montgomery Park has also proven to be a true revitalization catalyst for its Baltimore neighborhood. Since the project was completed the economic viability of the area has increased dramatically. Private developers have begun to invest in nearby housing and commercial development projects and the City has developed a master plan for the nearby Carroll Camden industrial site. Because of its impact on the community and its unique environmental features, Montgomery Park was awarded the 2003 Phoenix Awards national grand prize.

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